

Government Flying Service Environmental Report 2004

Foreword

This environmental report covers the environmental issues of the Government Flying Service (GFS) in 2004. In this report, we will focus on the key ways we work to help improve the environment and the direct environmental impact of our day-to-day departmental activities.

This report is primarily intended for Hong Kong citizens, our various business partners, other government departments, our own staff and other stakeholders. We understand that a single environmental report will probably not be capable of fully satisfying the information needs and interests of such a diverse group. If you feel there are specific areas that the report should include, please let us know and we will try to take into account your views in our future reports.

1. What we do

The Government Flying Service (GFS) is a disciplined services department of the Government of the Hong Kong Special Administrative Region and is located at the south-western edge of the Hong Kong International Airport .

We provide the community of Hong Kong with a wide range of flying services, including round-the-clock search and rescue coverage, casualty and medical evacuation, fire fighting and support to the law enforcement agencies and government departments. We also provide emergency services to the international air carriers within our Flight Information Region and international merchant ships using the shipping lanes within our Maritime Area of Responsibility.

The GFS has an establishment of 231 full-time civil servants as at 31 December 2004 responsible for operations, maintenance and administration. We operate a fleet of nine aircraft, namely two aeroplanes and seven helicopters to carry out the full range of flying services and support.

In 2004, the GFS flew a total of 6,296 hours. It assisted in 381 search and rescue operations, transported 1,365 patients to hospital by helicopter and flew approximately 8,263 government officers and official visitors. The actual recurrent expenditure of the GFS in 2004/05 was \$137 million.

All the flying, engineering and administrative activities, including environmental management activities, are monitored by both internal and external quality and audit control organizations. The GFS successfully obtained the ISO9001:2000 corporate certificate in 2003.

2. Our specific job

Our major tasks are to:

- Carry out search and rescue both over land and sea;
- Conduct casualty evacuation;
- Support the Hong Kong Police Force and other law enforcement agencies of Hong Kong in

carrying out their law enforcement duties;

- Assist in fire fighting and in responding to any other emergencies which constitute a threat to life or property.
- • carry out photography for aerial surveys; and
- Assist the medical services.

3. Vision and Strategy on Green Management

The GFS will continue its efforts to minimize the impact of its activities on the environment and provide the community with excellent search, rescue and aviation support services in an environmentally friendly manner.

4. Environmental, Health & Safety Policy

The GFS is committed to conducting operations in compliance with all environmental, health and safety requirements and regulations. The management is entrusted to providing a safe workplace for all our employees and customers.

The managers and supervisors in the GFS have the responsibility to ensure that every employee fully understands the policies and procedures applicable to his/her work area. The responsibility for safety and environmental practices follow the chain of command and supervisors will be held accountable for a subordinate's actions. The supervisors should provide all necessary training and instructions for their staff to perform their duties in an environmentally sound and safe manner. Supervisors will have their own safety and environmental performance included in their performance reviews.

Each employee has the responsibility to comply with the GFS work rules, and follow safe work practices and procedures established to protect the environment and the employees. All employees are asked to report to their supervisor all unsafe acts, hazardous conditions, and conditions which impact, or have the potential to impact the environment.

The Government Flying Service Environmental, Health and Safety Committee will oversee the Government Flying Service environmental, health and safety policy and goals. It is also responsible for addressing certain topics, including but not limited to waste reduction, accident prevention and training programs.

The Controller, GFS is personally committed to the continual improvement of our environmental, health and safety performance and will authorise actions necessary to achieve these objectives.

5. Green Personnel

In the GFS, we have the Green Manager to oversee the environmental issues of the department. He is assisted by the Green Task Force and Energy Wardens in implementing the goals set by the GFS Environmental, Health and Safety Committee on energy conservation.

Green Manager

The Senior Pilot (Aeroplane Training and Standards) has been appointed as the Green Manager of the GFS with the following responsibilities:

- (a) implementing a programme of green housekeeping within the department;
 - (b) introducing measures to increase staff awareness and involvement in relation to environmental issues;
- and

(c) publicising the commitment to protect the environment, formulating action plans and recording achievements.

He is the focal point whereby all initiatives related to the environment can be coordinated, sustained, reviewed and strengthened. He is assisted by the Assistant Departmental Secretary in carrying out these duties.

Green Task Force

The GFS set up a Green Task Force in February 2003 with the main focus on energy conservation. Members of the Task Force are:

Aircraft Engineer (E/I)2

Assistant Manager (Operations)

Assistant Departmental Secretary

They are representatives of the Engineering, Operations and Administration Sections. They are responsible for liaising with staff members to explore possible options for saving energy without affecting the GFS operations and also discussing with the Electrical and Mechanical Services Department (EMSD) on how to make the proposals and ideas into effective measures.

Energy Wardens

Energy wardens from different sections have been appointed since January 2005. Their main duty is to inspect and ensure that the housekeeping measures for saving energy (e.g. switching off lights, computers and photocopiers when they are not in use) are complied with. They are also responsible for reminding colleagues to observe these measures.

6. Our Environmental Concerns and Initiatives

6.1 Aircraft Noise

Helicopters

GFS pilots are very much concerned with the noise problems that are generated by helicopters. Due to the nature of our flying services, such as casualty evacuation and support of law and order, it is not always possible to avoid flights where the noise may affect the public. The GFS has always been conscious of the need to conserve the environment and has taken various measures, such as avoiding flying over built-up areas whenever possible, to minimize the noise nuisance caused to the public.

In addition to the existing noise abatement procedures in various locations in Hong Kong, we have imposed certain restrictions on helicopter operations in the vicinity of Silvermine Bay and Tai O since 2001. All pilots are required to follow the designated routes strictly and avoid flying directly over inhabited areas. A standard route to and from Silvermine Pass and the GFS headquarters has been designed to avoid the noise sensitive areas in Tung Chung.

With the replacement of the helicopter fleet, we are able to perform flying service in a more environmentally friendly way because the noise generated by the new helicopters is lower than that of the old one. It is also lower than the standard set by the International Civil Aviation Organization (ICAO). Comparison tables on noise level generated by our helicopters against ICAO's standards are given below:

AS332 L2 Helicopter

	ICAO Standard	AS332 L2 Helicopter
During Approach	100.7 db	96.1 db

During Take-off	99.7 db	94.6 db
During Flyover	98.7 db	93.5 db

EC155 B1 Helicopter

	ICAO Standard	EC155 B1 Helicopter
During Approach	97.9 db	95.7 db
During Take-off	96.9 db	92.2 db
During Flyover	95.9 db	88.9 db

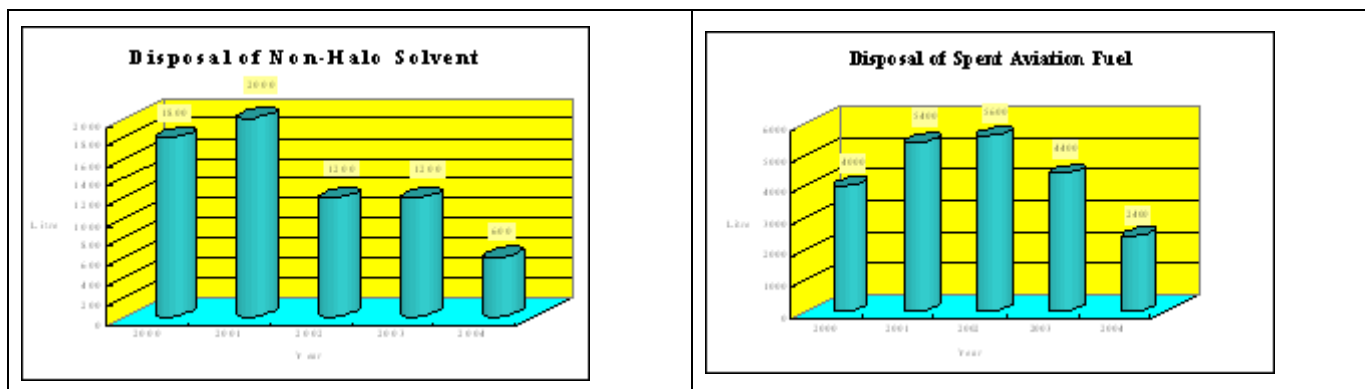
Aeroplanes

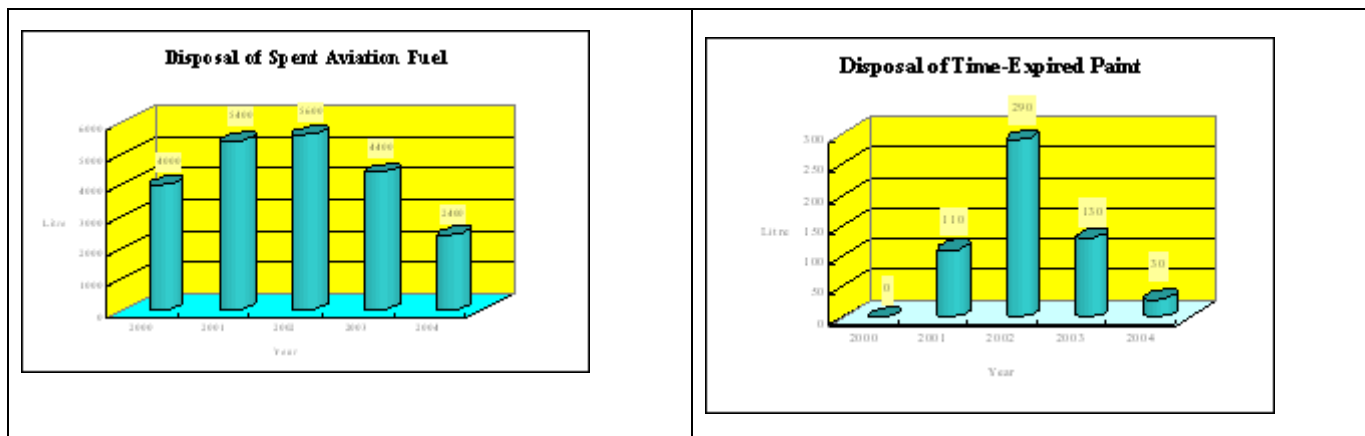
Since 2001, we have taken the following two measures in addressing the environmental issues:

1. The Aeronautical Information Publication issued by the Hong Kong Civil Aviation Department contains a requirement for aircraft departing from runway 07 at Chek Lap Kok to follow noise abatement departure procedures. The GFS follows the procedures strictly to ensure that the necessary safety of flight operations is maintained whilst minimizing the noise on the ground.
2. We are very aware of the environmentally sensitive area around the Maipo Marshland. We have been tasked by the Agricultural, Fisheries and Conservation Department to take aerial photographs of the area to assist in a bird population census. We conducted the aerial photography flight with full regard to our own operating restrictions and flew the aircraft above 1000 feet in order to minimize noise disturbance to the birds and wildlife of the area.

6.2 Chemical Substances

The common chemical substances used in the GFS for the maintenance of our fleet are cleaning solvent, aviation fuel (AVTUR), lubrication oil, grease and paints. These substances are used on a daily basis. The waste chemical substances are disposed of through Licensed Waste Collectors approved by the Environmental Protection Department. The amount of wastes disposed of in the past five years is as follows:





Note: The 290 litres of time-expired paint disposed in 2002 include about 150 litres of paint accumulated over 3 years but were only disposed of in 2002. We had not dispose of it earlier because the Environmental Protection Department required that chemical waste could not be disposed of without the relevant material safety data sheet and we were only able to obtain such data sheet for the 150 litres of paint in 2002.

The amount of chemical wastes disposed of between 2001 and 2003 was relatively high because of the increase in the number of helicopters in operation between November 2001 and March 2003 when the old fleet was yet to be phased out completely and the new fleet has been brought into operation. The overlap of the old and new fleets during this period has resulted in an increase in the amount of aviation fuel used in the daily fuel sampling process and chemical and fluids in maintenance activities. The amount of chemical wastes has gone back to normal after the whole of the old fleet has retired.

For flight safety, the GFS conducts fuel sampling for each aircraft daily before the fuel is injected into the aircraft. In the past, the GFS disposed of these fuel samples. To reduce the amount of chemical wastes, the GFS now filters the fuel samples and re-uses it for other purposes. This has resulted in a significant reduction in the amount of spent aviation fuel. In addition, the GFS reminds its staff regularly the importance of the effective use of chemicals and solvents in maintenance activities so as to further reduce the amount of chemical wastes.

6.3 Working with Other Government Departments in Environmental Protection

We work closely with other government departments in environmental protection. For example, our helicopters assist the Marine Department in surveying ships suspected of discharging oil in Hong Kong waters. We also help in spraying oil dispersant over the sea when required.

Besides, our aircraft take officers of the Environmental Protection Department to carry out aerial inspections, surveys and monitoring of river catchments on the spreading of wastewater plumes from major sewage outfalls. The fixed-wing aircraft are also used to take aerial photographs relating to land-fills, fish farms and the activities of industries which generate a large amount of waste.

6.4 Energy Use and Energy Savings Measures

Using carbon dioxide detectors to control the fresh air units

The GFS installed a carbon dioxide-based demand controlled ventilation system in its headquarters building in 2004. Conventional ventilation systems waste significant amounts of energy because a fixed amount of fresh air is cooled regardless of room occupancy. With the new system, carbon-dioxide sensors provide real-time monitoring of a room's occupancy, and thus step up the level of air conditioning only

when it is actually required. The consequent reduced loading of the chillers results in an estimated saving of HK\$161,000 in electricity expenditure per year.

Replacing T8 fluorescent lamps with T5 fluorescent lamps

The T5 fluorescent lamp is an improvement over the T8 fluorescent lamp in terms of electricity consumption. In view of this, the GFS started replacing all T8 fluorescent lamps in corridors of the GFS premises with T5 fluorescent lamps in December 2004. (The replacement work was completed in May 2005.) It is estimated that the use of T5 fluorescent lamps can reduce the expenditure on electricity by HK\$19,000 per year.

Installing occupancy sensors

Occupancy sensor is another modern-day invention contributing to the saving of electricity. Through detecting movements within an area, it automatically controls the switching of the lighting in the room. It functions best in places that are not constantly occupied by people. In September 2004, the GFS installed occupancy sensors in two wash rooms at the GFS premises to try out their effectiveness. They have been proved to be effective in saving energy. It is estimated that using the sensors in the two wash rooms can reduce the expenditure on electricity by HK\$6,000 per year. The GFS will extend the installation of the sensors to other rooms in the GFS building.

Activating energy-saving modes in computers

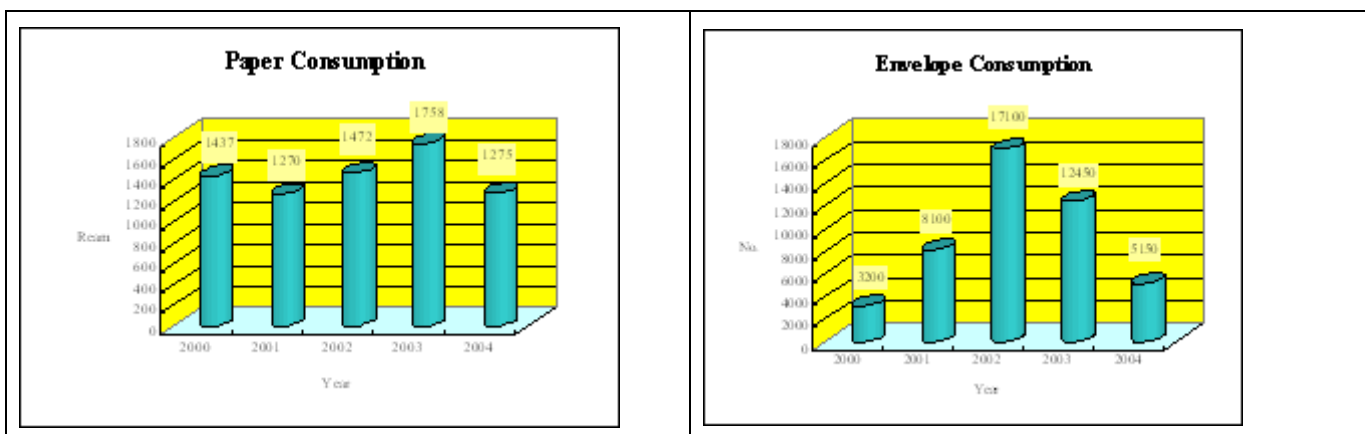
We understand that good practices and house keeping rules help towards energy conservation. From time to time, the GFS management will remind officers through emails or circulars of the importance of saving energy and also of the various means for achieving this. A recent example is the management's suggestion to staff to activate the energy-saving mode of their computers to reduce electricity consumption.

Although the units of energy saved through such means may not be significant, we strongly believe that instilling a sense of responsibility among staff is an important factor in any successful long-term energy conservation programme.

6.5 Office Resource Consumption

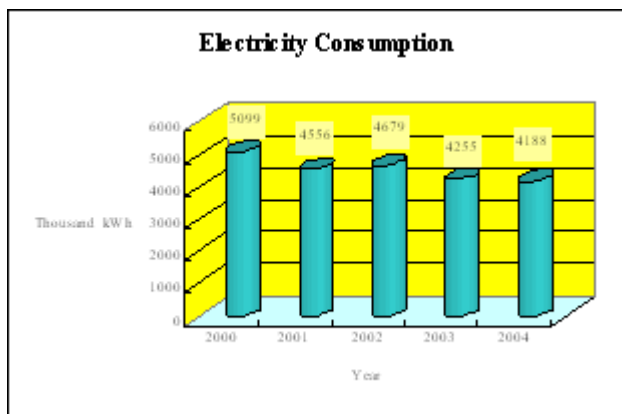
Paper and Envelope Consumption

The overall policy of the Government on paper consumption for departments is to reduce consumption by 10% within four years by 2006-07, using the Financial Year of 2002-03 as the base year. In the past two years (i.e. 2003-04 and 2004-05), we have reduced the paper consumption by 7%. We will continue to work towards achieving the target of 10% reduction by 2006-07.



Electricity Consumption

It is the government's policy for each department to reduce electricity consumption by 6% within four years by 2006-07, using the Financial Year of 2002-03 as the base year. The electricity consumption of the GFS for 2003-04 is 7.1% lower than that of 2002-03. We have not only achieved the target, but have, in fact, outperformed it; and this was achieved within one year instead of the required four.



6.6 Green Housekeeping Measures

The green housekeeping measures we have continued to implement in 2004 can be broadly grouped into the following categories:

- reducing paper and energy consumption;
- using environmentally friendly stationery, office equipment and lighting equipment;
- collecting recyclable material;
- implementing the smoke-free workplace policy;
- conducting regular indoor air quality checks; and
- encouraging staff to contribute ideas on green practices.

The Airport Authority organizes the Airport Environmental Best Practice Competition annually and the theme for 2004/05 was 'Good Energy Management'. The GFS is the 1st runner-up of the competition and the winner of the 'Best Energy Saving Award During Competition Period' award. We shall continue our effort in conserving energy and protecting the environment for a better tomorrow.

We have also participated in a number of environmental protection activities organized by the Environmental Protection Department and other departments/organizations to promote the awareness of our staff in environmental protection. These activities include 'Recycling of Used CDs', 'World Environment Day 2004' and 'The Community Chest Green Day'.

In the effort of reducing paper consumption, we have developed an Integrated Application System which allows us to work towards a paperless office. For example, various forms of the Engineering and Operations Sections have been uploaded onto the network and are printed only when in demand. We have also uploaded the procedure manuals of these two Sections onto the network thus reducing the need to produce hard copies. The system is now being tested and will be launched in 2005.

7. Aims for 2005

We will continue to encourage and remind our staff to practise and implement the various measures/programmes initiated in 2004 to help protect the environment. Our targets are:

- to maintain the electricity consumption at current level despite the anticipated increase in the number of electrical and electronic equipment in the coming year; and
- to report environmental performance of year 2005 by mid-2006.

We will continue to monitor progress in the above areas.

8. Information and Suggestions

For further information required or any suggestions, please contact the Departmental Secretary as follows:

by letter:	Government Flying Service 18 South Perimeter Road, Hong Kong International Airport, Lantau, Hong Kong
by fax:	2753 8438
by telephone:	2305 8203
by e-mail:	yupoyee@gfs.gov.hk